



EXECUTIVE SUMMARY

2011-12 Program Effectiveness Assessment (PEA) Executive Summary

This Program Effectiveness Assessment (PEA) has been prepared as a joint submittal by the County of Orange/Orange County Flood Control District (hereinafter referred to as the County) to meet the requirements of the Fourth Term Municipal Separate Storm Sewer System (MS4) NPDES Permits (Fourth Term Permits) that were issued by the Santa Ana and San Diego Regional Water Quality Control Boards to the County of Orange, the Orange County Flood Control District (OCFCD) and the incorporated cities of Orange County (collectively referred to as Permittees). The County's jurisdiction consists of largely undeveloped and developing areas as well as fragmented unincorporated islands.

The primary objective of the 2011-12 PEA is to assess effectiveness of implementation of the County's stormwater program between July 1, 2011 and June 30, 2012. This reporting period represents the eighth year of implementation of the 2003 Drainage Area Management Plan (DAMP) model programs within the County's jurisdiction, which straddles both Regional Board jurisdictions of Orange County.

The County utilizes a California Stormwater Quality Association (CASQA) developed approach to effectiveness assessment which identifies six Outcome Levels in order to help determine if desired outcomes on both an implementation and water quality/environmental basis are being achieved. Throughout this PEA, wherever information on program elements, activities, best management practices (BMPs), water quality monitoring, etc., are reported, the corresponding CASQA Outcome Level or Levels are shown indicated by a colored triangle with the appropriate number. This methodology is designed to allow readers of this report to more clearly identify which elements of the County's Stormwater Program are having the greatest impact on protection and improvement of water quality and the environment.

The County's 2011-12 PEA is organized into twelve (12) sections which correspond with the structure of the DAMP. Through implementation of the DAMP programs as described in its Local Implementation Plan (LIP), the County has continued to recognize water quality protection and improvement as a top priority. Some of the more notable achievements during the reporting period include:

Program Management (Section C-2)

- Participated in every meeting of the countywide program committees, subcommittees and task forces.
- Expanded implementation of a web-based, GIS integrated data management system (CBI MS4 Permit Manager).

Plan Development (Section C-3)

- The J01P28 Urban Runoff Treatment Facility, which utilizes sand filtration and ultraviolet (UV) disinfection to treat runoff from a stormdrain pipe prior to discharge to Aliso Creek, treated a total of 8.5 million gallons of runoff, and experienced a 98.92% average bacterial treatment efficiency rate.



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- The Poche Clean Beach Project, which utilizes sand filtration and ultraviolet (UV) disinfection to treat runoff from Prima Deshecha Channel in San Clemente, prior to discharge to the ocean, treated an estimated total of 128 million gallons, and experienced a 98% average bacterial treatment efficiency rate.
- The County, individually and collectively with other stormwater agencies, completed or participated in numerous studies to improve understanding of stormwater science and water quality improvement technologies.

Municipal Activities (Section C-5)

- Cleaned 16 miles of drainage facilities including 1,954 catch basins.
- Removed a total of 4,281 tons (9.4 million lbs.) of solid debris from the stormdrain system (combination of debris removed from catch basins, channels and pipes, trash barriers, dry weather diversion dams, pump stations and vaults).
- Diverted 326 million gallons of urban runoff to the sanitary sewer system for treatment from four diversion dams located in Huntington Beach, Fountain Valley and Costa Mesa.
- Prevented 320 tons of solid debris from reaching the stormdrain system in unincorporated areas through street sweeping activities.
- Collected 4,487,834 lbs. of household hazardous waste at the County's Household Hazardous Waste Collection Centers.
- Collected 39,045 gallons of used motor oil and 6,800 used oil filters through the County's used oil recycling program.
- Through the OCTA Measure M2 Environmental Cleanup Program, a total of 178 catch-basins in the unincorporated area were retrofitted with trash capture devices and three trash skimmers were purchased for installation at Dana Point Harbor, Newport Dunes, and Sunset Marina.
- OC Public Works became the 81st public works organization in the nation, and the tenth such agency in California, to achieve the honor of American Public Works Association (APWA) Accreditation (joining two other counties in California – Contra Costa and San Francisco).

Public Education/Public Participation (Section C-6)

- The County's OC Watersheds website, www.ocwatersheds.com, which focuses on pollution prevention methods and contains extensive educational resources, experienced approximately 93,937 "page views" during the reporting period and was recognized as a public education "Model Practice" by the APWA Accreditation team.
- Distributed a total of 2,800 outreach materials.
- Attained 98,675 public impressions through the County's public education and outreach effort.
- Partnered with several non-profit groups to host multiple volunteer cleanup events throughout the County (including three sites in County channels as part of the 15th



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annual Inner - Coastal & Watershed Cleanup Day) which resulted in more than 350 volunteers collecting 4,000+ lbs. of trash and debris.

- Executed a “pilot channel adoption agreement” with Disneyland Resort, allowing them to assume maintenance responsibility for a 1.75 mile section of Anaheim-Barber City Flood Control Channel in Anaheim.

New Development/Significant Redevelopment (Section C-7)

- Approved water quality management plans addressing post-construction runoff for 594 acres of new development and redevelopment.
- Held training sessions on new development/significant redevelopment program requirements for 65 attendees.

Construction (Section C-8)

- Conducted 1,451 stormwater inspections of construction sites under County jurisdiction resulting in 242 enforcement actions.
- Held training sessions on construction program requirements for 160 attendees.

Existing Development (Section C-9)

- Conducted 19 industrial facility stormwater inspections within the County’s jurisdiction with no enforcement actions.
- Conducted 160 commercial site/source stormwater inspections within the County’s jurisdiction resulting in 4 enforcement actions.

Illegal Discharges/Illicit Connections (Section C-10)

- Received a total of 237 pollution complaints/reports.
- Responded to 114 water pollution incidents, resulting in 17 enforcement actions.
- Worked closely with the California Attorney General’s Office and the Santa Ana Regional Water Quality Control Board to reach a \$1.6 million settlement on a pollution case initially investigated by OC Public Works.
- Due in part to implementation of the Countywide Area Spill Control (CASC) Program, Orange County experienced a total of only 4 sanitary sewer overflows (SSOs) which resulted in a beach closure during the 2011-12 reporting period and for a ten month period, no sewage spill related beach closures were recorded, marking the longest period of time Orange County has gone without one since record keeping began in 1987.

Water Quality Monitoring (Section C-11)

- Continued to coordinate implementation of the countywide monitoring programs.
- Heal the Bay’s 2011-12 *Annual Beach Report Card* reported the following: “Orange County grades for both summer dry and winter dry weather were excellent. 94% of monitoring locations received an A or B during summer dry weather and 87% received A or B grades during winter dry weather.”



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Watershed Management (Section C-12)

- The County continued to take the lead in coordinating with the public, cities, local, state and federal agencies as well as other stakeholders on watershed-scale efforts throughout Orange County including renewal of the cooperative agreement in the Newport Bay Watershed.



CONCLUSIONS AND RECOMMENDATIONS

2011-12 Program Effectiveness Assessment (PEA) Conclusion and Recommendations

This PEA spans a reporting period from July 1, 2011 through June 30, 2012 and contains information gathered from the eighth year of full implementation of the enhanced programs of the 2003 DAMP within the County's jurisdiction. As with prior PEA submittals, the goal of this report is to use implementation measures to demonstrate overall program effectiveness and drive the iterative process. To this extent, the County has integrated the California Stormwater Quality Association (CASQA) approach to effectiveness assessment into its program framework (see **Section C-2.5** for complete discussion). CASQA is currently in the process of refining their guidance on effectiveness assessment and the County's approach will change accordingly.

As implementation of stormwater program elements under the Fourth Term Municipal Separate Storm Sewer System (MS4) Permits continues, the major conclusions that can be drawn have not changed from the previous reporting period:

- 1) All County submittals have been made in compliance with the schedules in the Fourth Term MS4 Permits.
- 2) There continue to be strong indications that desired outcomes on both an implementation and water quality/environmental basis are being achieved.

As a consequence, the County submits the following general recommendation:

The increased complexity of the Fourth Term MS4 Permits combined with the economic challenges faced by local government make the decisions on where and how to allocate resources even more challenging for a municipal stormwater program. The County recommends continued pursuit of an integrated holistic approach to management of water resources on a regional and watershed scale.

Within the context of implementation of its stormwater program, as detailed within this 2011-12 PEA, the County submits the following recommendations, organized by program element/PEA section:

Program Management (Section C-2)

Continue the transition to a web-based, GIS-integrated data management system for multiple program elements.

Plan Development (Section C-3)

No significant modifications are recommended.

Legal Authority (Section C-4)

No significant modifications are recommended.

Municipal Activities (Section C-5)

No significant modifications are recommended.



CONCLUSIONS AND RECOMMENDATIONS

Public Education/Public Participation (Section C-6)

Continue to make modifications to this program element based on results and feedback from measurements such as surveys, website statistics, interaction with the public, etc.

New Development/Significant Redevelopment (Section C-7)

Facilitate the transition to the land development requirements of the Fourth Term MS4 Permits as they take effect.

Construction (Section C-8)

Continue to evaluate and retool the data management system the County uses to track building and grading permits.

Existing Development (Section C-9)

Continue to transition to managing existing development inventories and inspections through a web-based, GIS-integrated data management system.

Illegal Discharges/Illicit Connections (Section C-10)

No significant modifications are recommended.

Water Quality Monitoring (Section C-11)

Continue efforts to improve efficiency and effectiveness of monitoring activities.

Watershed Management (Section C-12)

Continue to coordinate development of Watershed Infiltration and Hydromodification Management Plans (WIHMPs) for watersheds in the Santa Ana Region, and update Watershed Workplans for watersheds in the San Diego Region